

Wu Xu

List of Publications by Year in descending order

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247
papers

43,925
citations

2093

100
h-index

2027

205
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256
all docs

256
docs citations

256
times ranked

21252
citing authors

#	ARTICLE	IF	CITATIONS
1	Lithium metal anodes for rechargeable batteries. <i>Energy and Environmental Science</i> , 2014, 7, 513-537.	15.6	3,665
2	Pathways for practical high-energy long-cycling lithium metal batteries. <i>Nature Energy</i> , 2019, 4, 180-186.	19.8	2,101
3	High rate and stable cycling of lithium metal anode. <i>Nature Communications</i> , 2015, 6, 6362.	5.8	1,954
4	Dendrite-Free Lithium Deposition via Self-Healing Electrostatic Shield Mechanism. <i>Journal of the American Chemical Society</i> , 2013, 135, 4450-4456.	6.6	1,736
5	In Situ Observation of the Electrochemical Lithiation of a Single SnO ₂ Nanowire Electrode. <i>Science</i> , 2010, 330, 1515-1520.	6.0	1,430
6	Advancing Lithium Metal Batteries. <i>Joule</i> , 2018, 2, 833-845.	11.7	1,052
7	Electrolyte additive enabled fast charging and stable cycling lithium metal batteries. <i>Nature Energy</i> , 2017, 2, .	19.8	1,048
8	Ionic Liquids: Ion Mobilities, Glass Temperatures, and Fragilities. <i>Journal of Physical Chemistry B</i> , 2003, 107, 6170-6178.	1.2	960
9	Hierarchically Porous Graphene as a Lithium-Air Battery Electrode. <i>Nano Letters</i> , 2011, 11, 5071-5078.	4.5	943
10	Ionic Liquids by Proton Transfer: Vapor Pressure, Conductivity, and the Relevance of pKa from Aqueous Solutions. <i>Journal of the American Chemical Society</i> , 2003, 125, 15411-15419.	6.6	841
11	Stable cycling of high-voltage lithium metal batteries in ether electrolytes. <i>Nature Energy</i> , 2018, 3, 739-746.	19.8	767
12	High-Voltage Lithium-Metal Batteries Enabled by Localized High-Concentration Electrolytes. <i>Advanced Materials</i> , 2018, 30, e1706102.	11.1	761
13	Accurate Determination of Coulombic Efficiency for Lithium Metal Anodes and Lithium Metal Batteries. <i>Advanced Energy Materials</i> , 2018, 8, 1702097.	10.2	704
14	Localized High-Concentration Sulfone Electrolytes for High-Efficiency Lithium-Metal Batteries. <i>CheM</i> , 2018, 4, 1877-1892.	5.8	628
15	Lewis Acid-Base Interactions between Polysulfides and Metal Organic Framework in Lithium Sulfur Batteries. <i>Nano Letters</i> , 2014, 14, 2345-2352.	4.5	623
16	Monolithic solid-electrolyte interphases formed in fluorinated orthoformate-based electrolytes minimize Li depletion and pulverization. <i>Nature Energy</i> , 2019, 4, 796-805.	19.8	621
17	Enabling High-Voltage Lithium-Metal Batteries under Practical Conditions. <i>Joule</i> , 2019, 3, 1662-1676.	11.7	598
18	Solvent-Free Electrolytes with Aqueous Solution-Like Conductivities. <i>Science</i> , 2003, 302, 422-425.	6.0	506

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19	Anode-Free Rechargeable Lithium Metal Batteries. <i>Advanced Functional Materials</i> , 2016, 26, 7094-7102.	7.8	495
20	High-energy lithium metal pouch cells with limited anode swelling and long stable cycles. <i>Nature Energy</i> , 2019, 4, 551-559.	19.8	492
21	Making Li-Air Batteries Rechargeable: Material Challenges. <i>Advanced Functional Materials</i> , 2013, 23, 987-1004.	7.8	477
22	Self-smoothing anode for achieving high-energy lithium metal batteries under realistic conditions. <i>Nature Nanotechnology</i> , 2019, 14, 594-601.	15.6	451
23	High-Efficiency Lithium Metal Batteries with Fire-Retardant Electrolytes. <i>Joule</i> , 2018, 2, 1548-1558.	11.7	436
24	Anodes for Rechargeable Lithium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2015, 5, 1402273.	10.2	423
25	Lithium Metal Anodes with Nonaqueous Electrolytes. <i>Chemical Reviews</i> , 2020, 120, 13312-13348.	23.0	393
26	TEMPO-Based Catholyte for High-Energy Density Nonaqueous Redox Flow Batteries. <i>Advanced Materials</i> , 2014, 26, 7649-7653.	11.1	387
27	LiBOB as Salt for Lithium-Ion Batteries: A Possible Solution for High Temperature Operation. <i>Electrochemical and Solid-State Letters</i> , 2002, 5, A26.	2.2	358
28	Critical Parameters for Evaluating Coin Cells and Pouch Cells of Rechargeable Li-Metal Batteries. <i>Joule</i> , 2019, 3, 1094-1105.	11.7	358
29	Dendrite-Free Lithium Deposition with Self-Aligned Nanorod Structure. <i>Nano Letters</i> , 2014, 14, 6889-6896.	4.5	326
30	<i>In Situ</i> TEM Study of Lithiation Behavior of Silicon Nanoparticles Attached to and Embedded in a Carbon Matrix. <i>ACS Nano</i> , 2012, 6, 8439-8447.	7.3	321
31	Effect of entropy change of lithium intercalation in cathodes and anodes on Li-ion battery thermal management. <i>Journal of Power Sources</i> , 2010, 195, 3720-3729.	4.0	313
32	Optimization of Air Electrode for Li/Air Batteries. <i>Journal of the Electrochemical Society</i> , 2010, 157, A487.	1.3	308
33	New Insights on the Structure of Electrochemically Deposited Lithium Metal and Its Solid Electrolyte Interphases via Cryogenic TEM. <i>Nano Letters</i> , 2017, 17, 7606-7612.	4.5	308
34	High-Concentration Ether Electrolytes for Stable High-Voltage Lithium Metal Batteries. <i>ACS Energy Letters</i> , 2019, 4, 896-902.	8.8	302
35	High Voltage Operation of Ni-Rich NMC Cathodes Enabled by Stable Electrode/Electrolyte Interphases. <i>Advanced Energy Materials</i> , 2018, 8, 1800297.	10.2	298
36	Dendrite-free Li deposition using trace-amounts of water as an electrolyte additive. <i>Nano Energy</i> , 2015, 15, 135-144.	8.2	297

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37	Balancing interfacial reactions to achieve long cycle life in high-energy lithium metal batteries. <i>Nature Energy</i> , 2021, 6, 723-732.	19.8	285
38	Hollow core-shell structured porous Si-C nanocomposites for Li-ion battery anodes. <i>Journal of Materials Chemistry</i> , 2012, 22, 11014.	6.7	280
39	Behavior of Lithium Metal Anodes under Various Capacity Utilization and High Current Density in Lithium Metal Batteries. <i>Joule</i> , 2018, 2, 110-124.	11.7	280
40	Real-time mass spectrometric characterization of the solid-electrolyte interphase of a lithium-ion battery. <i>Nature Nanotechnology</i> , 2020, 15, 224-230.	15.6	280
41	Radical Compatibility with Nonaqueous Electrolytes and Its Impact on an All-Organic Redox Flow Battery. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 8684-8687.	7.2	271
42	Recent Progress in Understanding Solid Electrolyte Interphase on Lithium Metal Anodes. <i>Advanced Energy Materials</i> , 2021, 11, 2003092.	10.2	271
43	Weakly Coordinating Anions, and the Exceptional Conductivity of Their Nonaqueous Solutions. <i>Electrochemical and Solid-State Letters</i> , 2001, 4, E1.	2.2	269
44	In Situ Transmission Electron Microscopy Observation of Microstructure and Phase Evolution in a SnO ₂ Nanowire during Lithium Intercalation. <i>Nano Letters</i> , 2011, 11, 1874-1880.	4.5	266
45	Demonstration of an Electrochemical Liquid Cell for Operando Transmission Electron Microscopy Observation of the Lithiation/Delithiation Behavior of Si Nanowire Battery Anodes. <i>Nano Letters</i> , 2013, 13, 6106-6112.	4.5	265
46	Observation and Quantification of Nanoscale Processes in Lithium Batteries by Operando Electrochemical (S)TEM. <i>Nano Letters</i> , 2015, 15, 2168-2173.	4.5	264
47	Effects of Carbonate Solvents and Lithium Salts on Morphology and Coulombic Efficiency of Lithium Electrode. <i>Journal of the Electrochemical Society</i> , 2013, 160, A1894-A1901.	1.3	260
48	A Localized High-Concentration Electrolyte with Optimized Solvents and Lithium Difluoro(oxalate)borate Additive for Stable Lithium Metal Batteries. <i>ACS Energy Letters</i> , 2018, 3, 2059-2067.	8.8	257
49	Review Localized High-Concentration Electrolytes for Lithium Batteries. <i>Journal of the Electrochemical Society</i> , 2021, 168, 010522.	1.3	257
50	In Situ TEM Investigation of Congruent Phase Transition and Structural Evolution of Nanostructured Silicon/Carbon Anode for Lithium Ion Batteries. <i>Nano Letters</i> , 2012, 12, 1624-1632.	4.5	256
51	Highly Stable Operation of Lithium Metal Batteries Enabled by the Formation of a Transient High-Concentration Electrolyte Layer. <i>Advanced Energy Materials</i> , 2016, 6, 1502151.	10.2	236
52	Investigation on the charging process of Li ₂ O ₂ -based air electrodes in Li-O ₂ batteries with organic carbonate electrolytes. <i>Journal of Power Sources</i> , 2011, 196, 3894-3899.	4.0	229
53	Ionic Liquids of Chelated Orthoborates as Model Ionic Glassformers. <i>Journal of Physical Chemistry B</i> , 2003, 107, 11749-11756.	1.2	217
54	Antraquinone with tailored structure for a nonaqueous metal-organic redox flow battery. <i>Chemical Communications</i> , 2012, 48, 6669.	2.2	217

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55	Origin of lithium whisker formation and growth under stress. <i>Nature Nanotechnology</i> , 2019, 14, 1042-1047.	15.6	211
56	Effects of Electrolyte Salts on the Performance of Li ⁺ O ₂ Batteries. <i>Journal of Physical Chemistry C</i> , 2013, 117, 2635-2645.	1.5	204
57	A High-Current, Stable Nonaqueous Organic Redox Flow Battery. <i>ACS Energy Letters</i> , 2016, 1, 705-711.	8.8	202
58	The passivity of lithium electrodes in liquid electrolytes for secondary batteries. <i>Nature Reviews Materials</i> , 2021, 6, 1036-1052.	23.3	201
59	Li ⁺ -Desolvation Dictating Lithium-Ion Battery's Low-Temperature Performances. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 42761-42768.	4.0	200
60	Reaction mechanisms for the limited reversibility of Li ⁺ O ₂ chemistry in organic carbonate electrolytes. <i>Journal of Power Sources</i> , 2011, 196, 9631-9639.	4.0	198
61	Investigation of the rechargeability of Li ⁺ O ₂ batteries in non-aqueous electrolyte. <i>Journal of Power Sources</i> , 2011, 196, 5674-5678.	4.0	197
62	The stability of organic solvents and carbon electrode in nonaqueous Li-O ₂ batteries. <i>Journal of Power Sources</i> , 2012, 215, 240-247.	4.0	197
63	Role of inner solvation sheath within salt-solvent complexes in tailoring electrode/electrolyte interphases for lithium metal batteries. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 28603-28613.	3.3	191
64	Ambient operation of Li/Air batteries. <i>Journal of Power Sources</i> , 2010, 195, 4332-4337.	4.0	189
65	Enhanced charging capability of lithium metal batteries based on lithium bis(trifluoromethanesulfonyl)imide-lithium bis(oxalato)borate dual-salt electrolytes. <i>Journal of Power Sources</i> , 2016, 318, 170-177.	4.0	186
66	Towards High-Performance Nonaqueous Redox Flow Electrolyte Via Ionic Modification of Active Species. <i>Advanced Energy Materials</i> , 2015, 5, 1400678.	10.2	181
67	High-Performance Silicon Anodes Enabled By Nonflammable Localized High-Concentration Electrolytes. <i>Advanced Energy Materials</i> , 2019, 9, 1900784.	10.2	175
68	Nano-structured Li ₃ V ₂ (PO ₄) ₃ /carbon composite for high-rate lithium-ion batteries. <i>Electrochemistry Communications</i> , 2010, 12, 1674-1677.	2.3	173
69	Optimization of Nonaqueous Electrolytes for Primary Lithium/Air Batteries Operated in Ambient Environment. <i>Journal of the Electrochemical Society</i> , 2009, 156, A773.	1.3	166
70	Guided Lithium Metal Deposition and Improved Lithium Coulombic Efficiency through Synergistic Effects of LiAsF ₆ and Cyclic Carbonate Additives. <i>ACS Energy Letters</i> , 2018, 3, 14-19.	8.8	161
71	Conductive Rigid Skeleton Supported Silicon as High-Performance Li-Ion Battery Anodes. <i>Nano Letters</i> , 2012, 12, 4124-4130.	4.5	160
72	Revealing the reaction mechanisms of Li ⁺ O ₂ batteries using environmental transmission electron microscopy. <i>Nature Nanotechnology</i> , 2017, 12, 535-539.	15.6	160

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73	Advanced Electrolytes for Fast-Charging High-Voltage Lithium-Ion Batteries in Wide-Temperature Range. <i>Advanced Energy Materials</i> , 2020, 10, 2000368.	10.2	159
74	Strategies towards enabling lithium metal in batteries: interphases and electrodes. <i>Energy and Environmental Science</i> , 2021, 14, 5289-5314.	15.6	156
75	Wide-Temperature Electrolytes for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 18826-18835.	4.0	150
76	Advanced intermediate-temperature Na-S battery. <i>Energy and Environmental Science</i> , 2013, 6, 299-306.	15.6	149
77	Effects of Nonaqueous Electrolytes on the Performance of Lithium/Air Batteries. <i>Journal of the Electrochemical Society</i> , 2010, 157, A219.	1.3	148
78	Lithium Difluorophosphate as a Dendrite-Suppressing Additive for Lithium Metal Batteries. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 22201-22209.	4.0	143
79	Suppressing Lithium Dendrite Growth by Metallic Coating on a Separator. <i>Advanced Functional Materials</i> , 2017, 27, 1704391.	7.8	141
80	Probing the Degradation Mechanisms in Electrolyte Solutions for Li-Ion Batteries by in Situ Transmission Electron Microscopy. <i>Nano Letters</i> , 2014, 14, 1293-1299.	4.5	137
81	A review on the stability and surface modification of layered transition-metal oxide cathodes. <i>Materials Today</i> , 2021, 46, 155-182.	8.3	132
82	Effects of fluorinated solvents on electrolyte solvation structures and electrode/electrolyte interphases for lithium metal batteries. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	131
83	Enhanced performance of graphite anode materials by AlF ₃ coating for lithium-ion batteries. <i>Journal of Materials Chemistry</i> , 2012, 22, 12745.	6.7	129
84	Factors affecting the battery performance of anthraquinone-based organic cathode materials. <i>Journal of Materials Chemistry</i> , 2012, 22, 4032.	6.7	126
85	Reduction Mechanism of Fluoroethylene Carbonate for Stable Solid-Electrolyte Interphase Film on Silicon Anode. <i>ChemSusChem</i> , 2014, 7, 549-554.	3.6	126
86	Dendrite-Free and Performance-Enhanced Lithium Metal Batteries through Optimizing Solvent Compositions and Adding Combinational Additives. <i>Advanced Energy Materials</i> , 2018, 8, 1703022.	10.2	123
87	Designing Advanced In Situ Electrode/Electrolyte Interphases for Wide Temperature Operation of 4.5 V Li LiCoO ₂ Batteries. <i>Advanced Materials</i> , 2020, 32, e2004898.	11.1	123
88	High-Power Lithium Metal Batteries Enabled by High-Concentration Acetonitrile-Based Electrolytes with Vinylene Carbonate Additive. <i>Advanced Functional Materials</i> , 2020, 30, 2001285.	7.8	121
89	Effects of Cesium Cations in Lithium Deposition via Self-Healing Electrostatic Shield Mechanism. <i>Journal of Physical Chemistry C</i> , 2014, 118, 4043-4049.	1.5	117
90	Effect of the Anion Activity on the Stability of Li Metal Anodes in Lithium-Sulfur Batteries. <i>Advanced Functional Materials</i> , 2016, 26, 3059-3066.	7.8	117

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91	In situ transmission electron microscopy and spectroscopy studies of interfaces in Li ion batteries: Challenges and opportunities. <i>Journal of Materials Research</i> , 2010, 25, 1541-1547.	1.2	112
92	Nanosheet-structured LiV_3O_8 with high capacity and excellent stability for high energy lithium batteries. <i>Journal of Materials Chemistry</i> , 2011, 21, 10077.	6.7	112
93	Nonflammable Electrolytes for Lithium Ion Batteries Enabled by Ultraconformal Passivation Interphases. <i>ACS Energy Letters</i> , 2019, 4, 2529-2534.	8.8	112
94	Effects of Imide-Orthoborate Dual-Salt Mixtures in Organic Carbonate Electrolytes on the Stability of Lithium Metal Batteries. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 2469-2479.	4.0	110
95	Stabilization of Silicon Anode for Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2010, 157, A1047.	1.3	108
96	Enhanced Stability of Li Metal Anodes by Synergetic Control of Nucleation and the Solid Electrolyte Interphase. <i>Advanced Energy Materials</i> , 2019, 9, 1901764.	10.2	108
97	Thermal stability and phase transformation of electrochemically charged/discharged LiMnPO_4 cathode for Li-ion batteries. <i>Energy and Environmental Science</i> , 2011, 4, 4560.	15.6	107
98	Template free synthesis of LiV_3O_8 nanorods as a cathode material for high-rate secondary lithium batteries. <i>Journal of Materials Chemistry</i> , 2011, 21, 1153-1161.	6.7	105
99	Enhanced Cycling Stability of Rechargeable LiO_2 Batteries Using High-Concentration Electrolytes. <i>Advanced Functional Materials</i> , 2016, 26, 605-613.	7.8	104
100	Complete Decomposition of Li_2CO_3 in LiO_2 Batteries Using $\text{Ir/B}_4\text{C}$ as Noncarbon-Based Oxygen Electrode. <i>Nano Letters</i> , 2017, 17, 1417-1424.	4.5	104
101	Stability of polymer binders in LiO_2 batteries. <i>Journal of Power Sources</i> , 2013, 243, 899-907.	4.0	102
102	Atomic to Nanoscale Origin of Vinylene Carbonate Enhanced Cycling Stability of Lithium Metal Anode Revealed by Cryo-Transmission Electron Microscopy. <i>Nano Letters</i> , 2020, 20, 418-425.	4.5	102
103	Applications of XPS in the characterization of Battery materials. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2019, 231, 2-10.	0.8	101
104	Stabilization of Li Metal Anode in DMSO-Based Electrolytes via Optimization of Salt-Solvent Coordination for LiO_2 Batteries. <i>Advanced Energy Materials</i> , 2017, 7, 1602605.	10.2	99
105	Oxygen-selective immobilized liquid membranes for operation of lithium-air batteries in ambient air. <i>Journal of Power Sources</i> , 2010, 195, 7438-7444.	4.0	96
106	Simultaneous Stabilization of $\text{Li}_{0.76}\text{Mn}_{0.14}\text{Co}_{0.10}\text{O}_2$ Cathode and Lithium Metal Anode by Lithium Bis(oxalato)borate as Additive. <i>ChemSusChem</i> , 2018, 11, 2211-2220.	3.6	89
107	Detrimental Effects of Chemical Crossover from the Lithium Anode to Cathode in Rechargeable Lithium Metal Batteries. <i>ACS Energy Letters</i> , 2018, 3, 2921-2930.	8.8	89
108	Ultrathin $\text{Li}_4\text{Ti}_5\text{O}_{12}$ Nanosheets as Anode Materials for Lithium and Sodium Storage. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 16718-16726.	4.0	87

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109	Mixed salts of LiTFSI and LiBOB for stable LiFePO ₄ -based batteries at elevated temperatures. <i>Journal of Materials Chemistry A</i> , 2014, 2, 2346.	5.2	85
110	Crown Ethers in Nonaqueous Electrolytes for Lithium/Air Batteries. <i>Electrochemical and Solid-State Letters</i> , 2010, 13, A48.	2.2	82
111	Synthesis and Characterization of Lithium Manganese Phosphate by a Precipitation Method. <i>Journal of the Electrochemical Society</i> , 2010, 157, A142.	1.3	76
112	In Situ Mass Spectrometric Determination of Molecular Structural Evolution at the Solid Electrolyte Interphase in Lithium-Ion Batteries. <i>Nano Letters</i> , 2015, 15, 6170-6176.	4.5	73
113	High Li ⁺ Self-Diffusivity and Transport Number in Novel Electrolyte Solutions. <i>Journal of the Electrochemical Society</i> , 2001, 148, A1352.	1.3	70
114	An Electrically Switchable Metal-Organic Framework. <i>Scientific Reports</i> , 2014, 4, 6114.	1.6	70
115	Lithium Metal Anodes and Rechargeable Lithium Metal Batteries. <i>Springer Series in Materials Science</i> , 2017, . .	0.4	70
116	Advanced Low-Flammable Electrolytes for Stable Operation of High-Voltage Lithium-Ion Batteries. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 12999-13006.	7.2	70
117	Reinvestigation on the state-of-the-art nonaqueous carbonate electrolytes for 5V Li-ion battery applications. <i>Journal of Power Sources</i> , 2012, 213, 304-316.	4.0	69
118	Novel Polyanionic Solid Electrolytes with Weak Coulomb Traps and Controllable Caps and Spacers. <i>Chemistry of Materials</i> , 2002, 14, 401-409.	3.2	67
119	High Capacity Pouch-Type Li-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2010, 157, A760.	1.3	67
120	High-performance anode based on porous Co ₃ O ₄ nanodiscs. <i>Journal of Power Sources</i> , 2014, 255, 125-129.	4.0	67
121	The Impact of Li Grain Size on Coulombic Efficiency in Li Batteries. <i>Scientific Reports</i> , 2016, 6, 34267.	1.6	67
122	Optimized Al Doping Improves Both Interphase Stability and Bulk Structural Integrity of Ni-Rich NMC Cathode Materials. <i>ACS Applied Energy Materials</i> , 2020, 3, 3369-3377.	2.5	66
123	B ₄ C as a stable non-carbon-based oxygen electrode material for lithium-oxygen batteries. <i>Nano Energy</i> , 2017, 33, 195-204.	8.2	65
124	Polymer-Quasi-Ionic Liquid-Electrolytes for High-Voltage Lithium Metal Batteries. <i>Advanced Energy Materials</i> , 2019, 9, 1902108.	10.2	65
125	Optimization of fluorinated orthoformate based electrolytes for practical high-voltage lithium metal batteries. <i>Energy Storage Materials</i> , 2021, 34, 76-84.	9.5	65
126	Air Dehydration Membranes for Nonaqueous Lithium-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2010, 157, A940.	1.3	63

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127	One dimensional and coaxial polyaniline@tin dioxide@multi-wall carbon nanotube as advanced conductive additive free anode for lithium ion battery. <i>Chemical Engineering Journal</i> , 2018, 334, 162-171.	6.6	63
128	The Mechanisms of Oxygen Reduction and Evolution Reactions in Nonaqueous Lithium-Oxygen Batteries. <i>ChemSusChem</i> , 2014, 7, 2436-2440.	3.6	62
129	Anion-Tunable Properties and Electrochemical Performance of Functionalized Ferrocene Compounds. <i>Scientific Reports</i> , 2015, 5, 14117.	1.6	62
130	Electrochemically Formed Ultrafine Metal Oxide Nanocatalysts for High-Performance Lithium-Oxygen Batteries. <i>Nano Letters</i> , 2016, 16, 4932-4939.	4.5	62
131	Improving Lithium Metal Composite Anodes with Seeding and Pillaring Effects of Silicon Nanoparticles. <i>ACS Nano</i> , 2020, 14, 4601-4608.	7.3	61
132	A Fusible Orthoborate Lithium Salt with High Conductivity in Solutions. <i>Electrochemical and Solid-State Letters</i> , 1999, 3, 366.	2.2	59
133	Dendrimer-Encapsulated Ruthenium Oxide Nanoparticles as Catalysts in Lithium-Oxygen Batteries. <i>Advanced Functional Materials</i> , 2014, 24, 7510-7519.	7.8	59
134	Preparation and electrochemical investigation of Li ₂ CoPO ₄ F cathode material for lithium-ion batteries. <i>Journal of Power Sources</i> , 2011, 196, 2241-2245.	4.0	58
135	Enhanced Stability of Lithium Metal Anode by using a 3D Porous Nickel Substrate. <i>ChemElectroChem</i> , 2018, 5, 761-769.	1.7	58
136	Surface and structural stabilities of carbon additives in high voltage lithium ion batteries. <i>Journal of Power Sources</i> , 2013, 227, 211-217.	4.0	55
137	Current Density Regulated Atomic to Nanoscale Process on Li Deposition and Solid Electrolyte Interphase Revealed by Cryogenic Transmission Electron Microscopy. <i>ACS Nano</i> , 2020, 14, 8766-8775.	7.3	54
138	Ionic Conductivity and Electrochemical Stability of Poly[oligo(ethylene glycol)oxalate] ⁻ Lithium Salt Complexes. <i>Chemistry of Materials</i> , 2001, 13, 575-580.	3.2	53
139	Optimized Operating Range for Large-Format LiFePO ₄ /Graphite Batteries. <i>Journal of the Electrochemical Society</i> , 2014, 161, A336-A341.	1.3	53
140	Electrolyte Regulating toward Stabilization of Cobalt-Free Ultrahigh-Nickel Layered Oxide Cathode in Lithium-Ion Batteries. <i>ACS Energy Letters</i> , 2021, 6, 1324-1332.	8.8	53
141	Stabilizing ultrahigh-nickel layered oxide cathodes for high-voltage lithium metal batteries. <i>Materials Today</i> , 2021, 44, 15-24.	8.3	53
142	Simply AlF ₃ -treated Li ₄ Ti ₅ O ₁₂ composite anode materials for stable and ultrahigh power lithium-ion batteries. <i>Journal of Power Sources</i> , 2013, 236, 169-174.	4.0	51
143	Vibrational Spectroscopy and ab Initio Studies of Lithium Bis(oxalato)borate (LiBOB) in Different Solvents. <i>Journal of Physical Chemistry A</i> , 2006, 110, 11467-11472.	1.1	50
144	Hybrid Air-Electrode for Li/Air Batteries. <i>Journal of the Electrochemical Society</i> , 2010, 157, A294.	1.3	50

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145	Structures of Orthoborate Anions and Physical Properties of Their Lithium Salt Nonaqueous Solutions. <i>Journal of the Electrochemical Society</i> , 2003, 150, E74.	1.3	49
146	“PolyMOB” lithium salt complexes: from salt-in-polymer to polymer-in-salt electrolytes. <i>Electrochimica Acta</i> , 2003, 48, 2037-2045.	2.6	47
147	LiMOB, an Unsymmetrical Nonaromatic Orthoborate Salt for Nonaqueous Solution Electrochemical Applications. <i>Journal of the Electrochemical Society</i> , 2004, 151, A632.	1.3	47
148	Preparation and characterization of novel “polyMOB” polyanionic solid electrolytes with weak coulomb traps. <i>Solid State Ionics</i> , 2002, 147, 295-301.	1.3	45
149	<i>In-Situ</i> Electrochemical Transmission Electron Microscopy for Battery Research. <i>Microscopy and Microanalysis</i> , 2014, 20, 484-492.	0.2	45
150	Optimized Electrolyte with High Electrochemical Stability and Oxygen Solubility for Lithium–Oxygen and Lithium–Air Batteries. <i>ACS Energy Letters</i> , 2020, 5, 2182-2190.	8.8	45
151	A three-dimensional macroporous Cu/SnO ₂ composite anode sheet prepared via a novel method. <i>Journal of Power Sources</i> , 2010, 195, 7403-7408.	4.0	44
152	Effects of cell positive cans and separators on the performance of high-voltage Li-ion batteries. <i>Journal of Power Sources</i> , 2012, 213, 160-168.	4.0	44
153	Formation of Interfacial Layer and Long-Term Cyclability of Li–O ₂ Batteries. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 14141-14151.	4.0	44
154	Constructing Robust Electrode/Electrolyte Interphases to Enable Wide Temperature Applications of Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 21496-21505.	4.0	44
155	Effects of Propylene Carbonate Content in CsPF ₆ -Containing Electrolytes on the Enhanced Performances of Graphite Electrode for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 5715-5722.	4.0	43
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157	Investigation of Ion–Solvent Interactions in Nonaqueous Electrolytes Using in Situ Liquid SIMS. <i>Analytical Chemistry</i> , 2018, 90, 3341-3348.	3.2	41
158	A highly stable host for lithium metal anode enabled by Li ₉ Al ₄ -Li ₃ N-AlN structure. <i>Nano Energy</i> , 2019, 59, 110-119.	8.2	39
159	Effects of Fluorinated Diluents in Localized High-Concentration Electrolytes for Lithium–Oxygen Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2002927.	7.8	39
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161	Electrocatalytic properties of poly(3,4-ethylenedioxythiophene) (PEDOT) in Li-O ₂ battery. <i>Electrochemistry Communications</i> , 2013, 29, 63-66.	2.3	36
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164	Enabling Ether-Based Electrolytes for Long Cycle Life of Lithium-Ion Batteries at High Charge Voltage. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 54893-54903.	4.0	35
165	In-Grown ZnCo ₂ O ₄ on Single-Walled Carbon Nanotubes as Air Electrode Materials for Rechargeable Lithium-Oxygen Batteries. <i>ChemSusChem</i> , 2015, 8, 3697-3703.	3.6	34
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167	Novel Alternating Comblike Copolymer Electrolytes with Single Lithium Ionic Conduction. <i>Chemistry of Materials</i> , 1998, 10, 1951-1957.	3.2	32
168	Electrochemical performances of LiMnPO ₄ synthesized from non-stoichiometric Li/Mn ratio. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 18099.	1.3	31
169	Stability of polymeric separators in lithium metal batteries in a low voltage environment. <i>Journal of Materials Chemistry A</i> , 2018, 6, 5006-5015.	5.2	31
170	A bifunctional electrolyte additive for separator wetting and dendrite suppression in lithium metal batteries. <i>Electrochimica Acta</i> , 2018, 270, 62-69.	2.6	31
171	Temperature Dependence of the Oxygen Reduction Mechanism in Nonaqueous Li-O ₂ Batteries. <i>ACS Energy Letters</i> , 2017, 2, 2525-2530.	8.8	30
172	Anion-trapping and polyanion electrolytes based on acid-in-chain borate polymers. <i>Electrochimica Acta</i> , 2003, 48, 2255-2266.	2.6	29
173	Discharge Performance of Li-O ₂ Batteries Using a Multiscale Modeling Approach. <i>Journal of Physical Chemistry C</i> , 2015, 119, 14851-14860.	1.5	29
174	Enhanced performance of Li LiFePO ₄ cells using CsPF ₆ as an electrolyte additive. <i>Journal of Power Sources</i> , 2015, 293, 1062-1067.	4.0	29
175	Highly efficient Ru/B ₄ C multifunctional oxygen electrode for rechargeable Li O ₂ batteries. <i>Journal of Power Sources</i> , 2019, 413, 11-19.	4.0	28
176	Optimization of Magnesium-Doped Lithium Metal Anode for High Performance Lithium Metal Batteries through Modeling and Experiment. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 16506-16513.	7.2	28
177	A Polymer-in-Salt Electrolyte with Enhanced Oxidative Stability for Lithium Metal Polymer Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 31583-31593.	4.0	28
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179	Electrolytes for high-voltage lithium batteries. <i>Trends in Chemistry</i> , 2022, 4, 627-642.	4.4	25
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182	Sulfone-based electrolytes for high energy density lithium-ion batteries. <i>Journal of Power Sources</i> , 2022, 527, 231171.	4.0	21
183	In situ ⁷ Li and ¹³ Cs nuclear magnetic resonance investigations on the role of Cs ⁺ additive in lithium-metal deposition process. <i>Journal of Power Sources</i> , 2016, 304, 51-59.	4.0	20
184	Systematic Evaluation of Carbon Hosts for High-Energy Rechargeable Lithium-Metal Batteries. <i>ACS Energy Letters</i> , 0, , 1550-1559.	8.8	20
185	LiBOB and Its Derivatives: Weakly Coordinating Anions, and the Exceptional Conductivity of Their Nonaqueous Solutions [<i>Electrochem. Solid-State Lett.</i> , 4, E1 (2001)]. <i>Electrochemical and Solid-State Letters</i> , 2001, 4, L3.	2.2	19
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187	Stable Solid Electrolyte Interphase Layer Formed by Electrochemical Pretreatment of Gel Polymer Coating on Li Metal Anode for Lithium-Oxygen Batteries. <i>ACS Energy Letters</i> , 2021, 6, 3321-3331.	8.8	17
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192	Lithium-Oxygen Batteries: Stabilization of Li Metal Anode in DMSO-Based Electrolytes via Optimization of Salt-Solvent Coordination for Li ₂ O Batteries (<i>Adv. Energy Mater.</i> 14/2017). <i>Advanced Energy Materials</i> , 2017, 7, .	10.2	11
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194	Characterization and Modeling of Lithium Dendrite Growth. <i>Springer Series in Materials Science</i> , 2017, , 5-43.	0.4	9
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196	Nonsacrificial Additive for Tuning the Cathode-Electrolyte Interphase of Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 4111-4118.	4.0	8
197	Facile Dual-Protection Layer and Advanced Electrolyte Enhancing Performances of Cobalt-free/Nickel-rich Cathodes in Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 17405-17414.	4.0	8
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200	Understanding the Effect of Additives in Li-ion and Li-Sulfur Batteries by Operando ec- (S)TEM. <i>Microscopy and Microanalysis</i> , 2016, 22, 22-23.	0.2	5
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202	The Effect of Solvent on the Capacity Retention in a Germanium Anode for Lithium Ion Batteries. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2018, 15, .	1.1	4
203	Lithiumâ€Metal Batteries: Highâ€Voltage Lithiumâ€Metal Batteries Enabled by Localized Highâ€Concentration Electrolytes (<i>Adv. Mater.</i> 21/2018). <i>Advanced Materials</i> , 2018, 30, 1870144.	11.1	4
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206	High Coulombic Efficiency of Lithium Plating/Stripping and Lithium Dendrite Prevention. <i>Springer Series in Materials Science</i> , 2017, , 45-152.	0.4	3
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208	Batteries: Towards Highâ€Performance Nonaqueous Redox Flow Electrolyte Via Ionic Modification of Active Species (<i>Adv. Energy Mater.</i> 1/2015). <i>Advanced Energy Materials</i> , 2015, 5, .	10.2	2
209	Primary Lithium Air Batteries. , 2014, , 255-289.		2
210	Lithium Metal Batteries: Highly Stable Operation of Lithium Metal Batteries Enabled by the Formation of a Transient Highâ€Concentration Electrolyte Layer (<i>Adv. Energy Mater.</i> 8/2016). <i>Advanced Energy Materials</i> , 2016, 6, .	10.2	1
211	Imaging Electrochemical Processes in Li Batteries by Operando STEM. <i>Microscopy and Microanalysis</i> , 2017, 23, 1970-1971.	0.2	1
212	Application of Lithium Metal Anodes. <i>Springer Series in Materials Science</i> , 2017, , 153-188.	0.4	1
213	Current Density Induced Microstructure Evolution on Li Dendrite and Solid Electrolyte Interphase Revealed By Cryogenic Transmission Electron Microscopy. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 379-379.	0.0	1
214	High Performance Silicon Anodes Enabled By Nonflammable Localized High Concentration Electrolytes. <i>ECS Meeting Abstracts</i> , 2019, MA2019-02, 229-229.	0.0	1
215	In-Situ TEM Study of Phase Transformation and Structural Evolution of Si-C Nanocomposite Anode for Lithium Ion Battery. <i>Microscopy and Microanalysis</i> , 2012, 18, 1320-1321.	0.2	0
216	Polyanion Type Cathodes for Stationary Lithium Ion Batteries. <i>ECS Meeting Abstracts</i> , 2012, , .	0.0	0

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218	Direct Observation of Electrolyte Degradation Mechanisms in Li-Ion Batteries. <i>Microscopy and Microanalysis</i> , 2014, 20, 1624-1625.	0.2	0
219	In-situ TEM Coupled with AFM Cantilever for Direct Observation of Li Dendrite Nucleation and Growth Under Stress. <i>Microscopy and Microanalysis</i> , 2020, 26, 3038-3039.	0.2	0
220	Electrolytes for Lithium-Ion and Lithium Metal Batteries. , 2021, , .		0
221	Optimization of Magnesium-Doped Lithium Metal Anode for Lithium Metal Batteries: Simulation and Experiment. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 392-392.	0.0	0
222	Effects of Non-Solvating Fluorinated Solvents in Localized High-Concentration Electrolytes for Lithium Metal Batteries. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 465-465.	0.0	0
223	A Stable Li Metal Anode with Electrochemically Treated Poly(ethylene oxide) Coating for Lithium Oxygen Batteries. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 402-402.	0.0	0
224	Advanced Electrolyte Stabilizing Ultrahigh-Nickel Layered Oxide Cathode in High-Voltage Lithium Metal Batteries. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 393-393.	0.0	0
225	(Invited) Extend Calendar Life of Si Based Li-Ion Batteries. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 112-112.	0.0	0
226	New Electrolyte for Li Metal Batteries with High Voltage NMC811 Electrode. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
227	Enabling High-Voltage Lithium Metal Batteries Under Practical Conditions. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
228	Effects of Separators on Lithium Metal Batteries. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
229	Enabling High-Energy Lithium Metal Batteries through Electrolyte Strategy. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
230	Detrimental Effects of Chemical Cross-Talk in Rechargeable Lithium Metal Batteries. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
231	(Invited) Electrolytes for Wide-Temperature Application Range of Lithium Ion Batteries. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
232	The Fundamental Mechanism behind the Stability of Li Metal Anodes in Non-Aqueous Electrolytes. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
233	Hybrid Polymer Electrolytes for Lithium Metal Batteries. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
234	Extending Cycle Life and Safety of Si Based High Energy Li Ion Batteries Using Localized High Concentration Electrolytes. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0

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235	(Invited) Enhancing Oxygen Stability in High-Nickel Cobalt-Free Layered Oxide Cathode Materials By Three-Dimensional Targeted Doping. ECS Meeting Abstracts, 2020, MA2020-01, 140-140.	0.0	0
236	(Invited) Localized High Concentration Electrolytes for Li Metal and Li Ion Batteries. ECS Meeting Abstracts, 2020, MA2020-01, 255-255.	0.0	0
237	High Efficiency, Low Polysulfides Solubility Electrolytes for Lithium Sulfur Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 53-53.	0.0	0
238	Low-Flammable Electrolytes for Stable Operation of High Energy-Density Lithium-Ion Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 262-262.	0.0	0
239	Stability of Li Metal Anode and Calendar Life of Lithium Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 92-92.	0.0	0
240	(Invited) Directions of High Energy Batteries and Status of Battery500 Consortium. ECS Meeting Abstracts, 2020, MA2020-02, 29-29.	0.0	0
241	(Invited) Designing New Electrolytes for High-Energy Lithium Metal Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 856-856.	0.0	0
242	Enhanced High-Temperature Stability of Li-Ion Battery with Li-Rich Oxide Cathode By Localized High-Concentration Electrolyte. ECS Meeting Abstracts, 2020, MA2020-02, 149-149.	0.0	0
243	Ether-Based Electrolytes Enabling Long-Stability High-Voltage Lithium-Ion Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 791-791.	0.0	0
244	Enhanced Electrode/Electrolyte Interphases in Fluorinated Orthoformate Electrolytes for Stable High-Voltage Lithium Metal Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 686-686.	0.0	0
245	(Invited) Highly-Stable Li Ion Batteries Based on Porous Si Anode and Localized High Concentration Electrolytes. ECS Meeting Abstracts, 2020, MA2020-02, 23-23.	0.0	0
246	(Digital Presentation) Effects of Solvents and Additives in Non-Conventional Liquid Electrolytes for Lithium-Ion Batteries. ECS Meeting Abstracts, 2022, MA2022-01, 193-193.	0.0	0
247	Development of Anode-Free Metal Batteries. ECS Meeting Abstracts, 2022, MA2022-01, 36-36.	0.0	0